DOCUMENT RESUME

ED 229 713 CG 016 685

AUTHOR Sacks, Joanne, And Others
TITLE A Study of the Interaction between Anxiety and Attention.
PUB DATE 27 Oct 82
NOTE 23p.; Paper presented at the Annual Meeting of the Northeastern Educational Research Association (13th, Falk View, NY, October 25-28, 1982).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attention Control; College Students; Higher Education; Listening; *Response Style (Tests); *Stress Variables; *Test Anxiety; Well Being
IDENTIFIERS Sarason Test Anxiety Scale; Selective Attention Test (Wahl); Worry Emotionality Scale (Liebert and Morris)

ABSTRACT

Current test anxiety theory suggests that achievement differences between high and low anxious students are due to differences in attention. In an attempt to investigate the interaction between various components of test anxiety, stress, and tasks measuring attentional flexibility, undergraduate students (N=45) completed Sarason's Test Anxiety Scale and the Worry-Emotionality Scale (Liebert and Morris). Each subject was assigned to a high stress condition or a control condition, both of which involved listening tasks. Data analyses indicated that there was no significant interaction between test anxiety and stress. However, a main effect for worry was detected, suggesting that this cognitive component of test anxiety negatively affects the attentional processing of anxious students. The results suggest that future research attempt to incorporate performance tasks that require differing levels of cognitive processing. (AG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED229713

A Study of the Interaction Between Anxiety and Attention

Joanne Sacks
Howard Everson
Sigmund Tobias
City University of New York

Presented at the 13th Annual Meeting of NERA, October 27,1982.

CG 016685

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Joanne Sacks
Howard Everson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ABSTRACT

Current test anxiety theory suggests that achievement differences between high and low anxious students are due to differences in attention. Thus, it was reasoned that highly anxious students divide their attention between negative self-concerns and learning task demands to a greater degree than those lower in anxiety. The aim of this study was to investigate this hypothesized interaction. Specifically, this study investigated the relationships among various components of test anxiety (state/trait and worry/ emotionality), stress, and tasks measuring attentional flexibility. Forty-five S's were randomly assigned to either a high or low stress condition. Multiple regression analysis indicated that there were no significant interactions between test anxiety and stress. However, a main effect for worry was detectetd, suggesting that this cognitive component of test anxiety impacts negatively on the attentional processing of anxious students.

Introduction

In the 1940's and 50's, much research was aimed at determining the factors associated with underachievement in schools. Not surprisingly, anxiety was seen as one of the variables most commonly associated with underachievement. The highly anxious student apparently worries about exams and shows the physiological reaction patterns usually accompanying worry. This type of interference is commonly referred to as test anxiety.

The problems associated with test anxiety are rooted in American educational practice. The literature contains many examples of the way anxiety relates to lower levels of ac-

hievement and lower grades. For example, a recent review of the effects of anxiety on learning from instruction in a variety of settings, ranging from traditional classroom environments to individualized instructional formats, has provided an abundance of evidence suggesting anxiety interferes with achievement (Sieber, O'Neil, & Tobias, 1977; Tobias, 1980). Similar effects of t t anxiety on college students' grades have been reported as well (Spielberger, 1962).

Rather than continuing to document the debilitating effects of anxiety on school learning, progress in this area demands research directed at identifying the basic cognitive processes disrupted by high levels of anxiety. If, for example, it can be demonstrated that specific cognitive processes are differentially affected by anxiety, then our knowledge of the effects of anxiety on learning from instruction would be enhanced; and more precise methods for ameliorating these effects could be developed. Our aim in this study was to identify those components of attention most impacted by anxiety and evaluative stress.

Review of Research

A vigorous research effort, consisting of hundreds of studies published over the past quarter century, has been devoted to refining the construct of test anxiety by focusing on such issues as the distinctions between state and trait notions of anxiety (Spielberger, 1972), the cognitive and

emotional components of anxiety (Liebert & Morris, 1967; Richardson et al, 1977), the relationship of anxiety to learning style (Loo & Cauthen, 1976) and anxiety treatment programs (Allen, 1972; Meichenbaum, 1972; Spielberger, 1976). Further, reviews of this research suggest that highly anxious learners perform more poorly following evaluative "ego involving" instructions, while the opposite seems to be the case for low anxious students (Deffenbacher, 1978; Paul & Ericksen, 1964; I. Sarason, 1958, 1961). A sound theory of test anxiety, then, must account not only for individual performance differences, but must also help to untangle the apparent interaction of anxiety, stress, and performance.

Given the complexity of the issues surrounding test anxiety it is no surprise to find a number of varying explanations for the reported performance differences between high and low test-anxious students. These performance differences have been attributed to a variety of factors including a failure to attend to relevant aspects of the task at hand, and intrusion of irrelevant thoughts, and the learner's level of emotional arousal (Easterbrook, 1959; Mandler & Sarason, 1966; I.Sarason, 1972; Wine, 1971,1980). These explanations, however, may not be contradictory; but simply may be encompassing both the cognitive and emotional components of test anxiety (Liebert & Morris, 1967; Seiber, 1977).

Wine (1971, 1980), for example, reviewed the literature on test anxiety and proposed a cognitive/attentional model

of test anxiety. Wine's model suggests that the performance differences between high and low test-anxious students are due largely to differences in attentional flexibility during testing. In Wine's view, "the highly test-anxious person is focused on self-evaluative, self-deprecatory thinking and the perception of his autonomic responses. Since the difficult tasks on which the test-anxious person does poorly require full attention for adequate performance, he cannot perform adequately while dividing his attention between internal cues and task cues" (1970, p1). This notion of attentional flexibility has been referred to elsewhere as having to do with the ease with which attention is switched from one stimulus to another (Keele, et al, 1978).

Similarly, I. Sarason (1972) concluded that "what distinguishes the high test anxious individual are (1) the manner in which he attends to the events of his environment, and (2) how he interprets and utilizes the information provided by these events" (1972, p75). For the most part, both theorists are arguing that highly anxious students spend relatively more time attending to task-irrelevant events than low anxious students. As a consequence, performance is hindered. Moreover, both theorists stress the need for further empirical support of an information-processing model of test anxiety.

In accordance with the cognitive-attentional model of test anxiety, Kahneman (1973) has reported increased focali-

zation of attention occuring at high levels of arousal. That research has led Kahneman to hypothesize that an individual's attentional capacity varies with levels of arousal. And generally, this increased focalization of attention at high levels of arousal facilitates completion of the task. More importantly, he argues that under certain circumstances this increased focalization accompanying arousal may serve to reduce the individual's ability to complete the task successfully. Three situations were of particular interest to Kahneman: (1) when the task is complex and successful performance requires that attention be deployed over a wide range of cues; (2) when the task requires the individual to make fine discriminations in order to determine relevant cues; and (3) when the nature of the task requires divided rather than unitary attention.

The problem situations referred to by Kahneman (tasks requiring a range of cue processing and discriminations) are characteristic of many academic problem-solving tasks. And more importantly, they suggest that if anxiety is accompanied by high levels of arousal, academic performance may be impaired as the result of an attentional deficit. This view fits rather neatly with the cognitive-attentional view of test anxiety discussed earlier.

Research on attention has suggested that individuals apparently differ in the speed with which they switch attentional focus. For example, Gopher and Kahneman (1971) found

that the ability to switch attention from one ear to another is related to the proficiency of military pilots. In a related study, Keele (1978) investigated attentional flexibility using four tasks: a priming task, a rare event task, and alternation task, and a dichotic listening task. If people differ on an attentional flexibility dimension, Keele reasoned, then strong correlations could be expected among the varying tasks. In general, the correlations reported are not large, and the sample size (N=15) rather small. Nonetheless, the authors are encouraged that such research may, indeed, be approaching a methodology for assessing such a cognitive process.

The literature reveals that one of the most widely used methods for investigating the specific mechanisms involved in attention is the binaural listening task. This task is an outgrowth of a series of studies on selective listening to speech (Egeth, 1967). In this experimental paradigm the subject recieves one or more auditory messages either successively (a signal to one ear followed by a signal to the opposite ear) or simultaneously (two different signals presented to both ears at once). For the most part, studies using this design focused on the detection of uniformities across groups in an attempt at clarifying the processes involved in attention.

Recently, methodologies have become available which are thought to be sensitive to individual differences in atten-

tion (Keele, 1978; Wahl, 1976). For example, Wahl offers an objective performance based index of attentional processing using the binaural listening task paradigm. His hope is that such a task will enable researchers to determine how well an individual can focus and broaden his/her attention. This attentional index was designed to (1) provide a baseline measure of adequate hearing and memory; (2) provide a measure of an individual's ability to focus attention and resist distraction; and (3) to assess an individual's ability to broaden attention and monitor multiple channels of information. Although Wahl's measure was developed on only thirty subjects, the wide range of scores reported suggest that this task may, indeed, be sensitive to individual differences in attentional capacity.

These newly emerging approaches in studies of attention are, in general, converging on the notion that attention is a multi- dimensional construct, a dynamic system of interactive processes (Kreitzberg, 1978) The componential view that is emerging may lend itself to more finer grain analyses of the relationship between the components of attention and anxiety. In a recent review of the test anxiety literature generated by the use of the worry-emotionality scale, Morris (1981) concluded that the inverse relationship reported between these components of anxiety and academic performance, may be attributable primarily to the worry-performance dimension. Such a conclusion suggests that an examination of

the nature of the relationship between the components of anxiety (worry/ emotionality) and the components of attention (focusing and broadening processes) may serve to clarify the often reported performance decrements associated with anxiety. Thus, by investigating these potential interactions, using an aptitude treatment interaction approach (Cronbach and Snow, 1977), this study attempted to identify the specific components of attention impacted by anxiety.

Hypotheses

Current test anxiety theory suggests that performance differences between high and low test anxious students may be due largely to differences in attentional processing capability during testing. Prior research clearly suggests that high anxious students perform more poorly under conditions of evaluative stress (Deffenbacher,1978; Morris, et al,1981). Moreover, the cognitive component of test anxiety (worry) is hypothesized to negatively impact the attentional processing capability of highly anxious students, particularly under stressful conditions, not unlike those when taking a test. In this study we sought to investigate the attentional processing capabilities of high and low anxious students under varying levels of evaluative stress, using the binaural listening task paradigm discussed above.

Since the aim of this study was to investigate the possible interactions between anxiety, attention, and stress, the

following hypotheses were examined: (1) it was expected that regardless of stress condition, highly anxious students would perform more poorly on the attentional tasks than low anxious students; (2) an interaction between stress and anxiety was predicted such that highly anxious students would perform less well in the high stress condition than their counterparts in the low stress condition; and (3) the specific component of worry will have the most significant negative impact on an individual's attentional processing capabilities.

Method

Subjects

The subjects were 45 undergraduate students. All subjects were administered the Test Anxiety Scale (Sarason, 1972) and the Worry-Emotionality Scale (Liebert & Morris, 1967) prior to assignment to the experimental condition. Subjects were assigned randomly to either a high or low stress experimental group.

Instruments & Materials

Test Anxiety Scale (Sarason,1972).

The TAS is a 37 item instrument for measuring self-reported anxiety. The TAS is a pencil and paper measure based largely on the items from the Mandler and Sarason (1952) Test Anxiety Questionairre (TAQ) and re-written in a true/false format.

Worry-Emotionality Scale (Liebert & Morris,1967).

This ten item self-report scale contains five items for each component. These items were developed from the TAQ ,as well. Items are rated on a 1 to 5 scale indicating how much the feeling, state, or condition is believed to apply. The

range of scores on each subscale varies from 5 to 25, with increasing scores indicating more worry or emotionality.

Selective Attention Test (Wahl,1976).

This is an objective, performance based measure of attentional flexibility that uses three listening tasks as indices. Briefly, these listening tasks are: (1) monaural - a baseline task of hearing and memory in which seven lists of one syllable words are presented with varying list lengths; (2) dichotic - a binaural listening task designed to determine how well subjects focus attention and filter out distraction using different words presented simultaneously to each ear and requiring the subject to remember the words presented to a "target" ear; and (3) simultaneous - a listening task designed to assess a subject's ability to broaden or disperse attention in which different words are presented simultaneously to each ear and requiring the subject to remember both words.

Procedures

S's were administered the TAS and the Worry-Emotionality Scale prior to assignment to either one of two experimental conditions - a high evaluative stress condition and a control condition. In addition, for each experimental group the Worry-Emotionality Scale was re-administered after each subtask.

Experimental stress was manipulated by presenting each subject with instructions adapted from I. Sarason (1972). The first two paragraphs of the instructions described the project and briefly explained the listening tasks for both groups. The final paragraph varied with the high stress instructions stressing the intelligence testing nature of the tasks and encouraging the subjects to do well. The control group's instructions merely thanked them for participating and reiterated the confidential nature of the results.

The stimulus words for each of the listening tasks were one syllable and were presented via stereo tape recorder and ear phones. Regardless of listening task, seven lists of words, varying in length from 2 to 8 words, were presented to each subject. Following each presentation, S's were shown a printed list of words they heard , including twice that number of words not presented. S's were asked to identify the words they heard during the particular task.

S's response to the recognition lists were scored for the number of target ear words correctly identified and the num-

ber of control words incorrectly identified. The target ear was varied randomly throughout the experiment. The number of non-target ear words identified was recorded for the binaural tasks since they represent intrusion errors. Each score was summed across all seven word lists to yield a measure for each listening task. The score for each task, then, represents the number of words correctly identified minus the number of errors.

Data Analysis

The statistical procedure appropriate for this study follows from the aptitude x treatment interaction approach, commonly referred to as ATI, advocated by Cronbach & Snow (1977). Within the ATI framework, the hypothesis that test anxiety interacts with evaluative stress to impair attentional processing translates into regression analysis terms. The multiple regression analysis would include both the dichotic and simultaneous listening tasks as dependent variables and the TAS, worry, emotionality, stress, and the monaural listening tasks as independent or predictor variables. In this way, the main effects for the components of test anxiety and stress, as well as their interactions, can be examined.

Results & Discussion

Means and standard deviations of both the independent and dependent variables appear in Table 1 separately for both groups of subjects.

Insert Table 1 here

T tests for the significance of the differences between the means on the dependent variables, the dichotic and simultaneous listening tasks, indicated that there was no difference between the control group and the experimental group on either of the two measures. Contrary to expectations, a significant main effect for stress was not detected. This

suggests that the experimental instructions designed to induce stress did not work on this sample of students. This notion is further supported by the rather low mean scores on both the worry and emotionality components of the state anxiety measure.

Intercorrelations among the independent and dependent variables for the entire sample (N=45) are given in Table 2.

Insert Table 2 here

The low positive correlations between the stress vector and both the dependent variables suggest that, if anything, stress may have facilitated performance somewhat on the binaural listening tasks. The correlations between the worry measure and both the dependent variables indicates that any cognitive interference experienced by the S's during performance may be attributed to worry. The negative direction of the correlations between these variables, particularly the strong negative correlation between worry and the simultaneous processing task, suggests that worry did, indeed, interfere with the attentional processes measured by those tasks.

Since the comparisons of the means for both the control group and the experimental group revealed no significant differences between them on the dependent measures, data from the entire sample (N=45) were then analyzed using multiple linear regression techniques. Moreover, since there were two dependent variables, the dichotic and simultaneous

listening tasks, regression equations including the independent variables stress, TAS, emotionality, the monaural listening task, and their interactions were generated and examined separately for each dependent variable. Because many of the independent variables were intercorrelated, particularly the anxiety measures, an attempt was made to select the best set of predictor variables for both dependent variables. This was done by comparing the amount of variance accounted for in each dependent variable by each independent variable, as well as all the possible two-way and three-way interactions. The results of those comparisons, and the subsequent regression analyses for both dependent variables are summarized in Table 3.

Insert Table 3 here

For the dichotic measure, the variable assumed to measure how well one focuses attention and resists distraction, a main effect for the base line measure of hearing and memory (the monaural task) was found, along with a significant interaction effect of worry and stress. This regression equation predicted about 13% of the variance in the dichotic measure and produced an $F = 3.15$, $p < .05$.

The simultaneous measure, the dependent variable assumed to measure how well one broadens or disperses their attention, was predicted best by a regression equation that included a main effect for the monaural task, worry, and an

interaction between worry and stress. This equation accounted for about 21% of the variance and produced and $F = 3.54$, $p < .03$.

The results of these regression analyses do not provide complete support for our hypotheses. Clearly, the expected main effect for test anxiety as measured by the TAS was not supported using either the dichotic or simultaneous task as the dependent measure. However, the specific component of test anxiety measured as worry did have a significant main effect on the simultaneous listening task scores, and it also contributed to the worry x stress interaction found for both dependent variables. Consequently, the predicted main effect for worry was supported when the dependent variable was the simultaneous processing task. In contrast, no main effect for worry was found when the dependent variable was the dichotic listening task. The emotionality component of the Worry-Emotionality Scale added little to the variance in either dependent variable.

Conclusions

The cognitive-attentional view of test anxiety (Wine,1971,1980) received qualified support from the results of this study. This bi-directional model of test anxiety, it will be recalled, suggests that anxious students perform poorly on those academic tasks requiring sustained focused attention primarily because they are too preoccupied with

self-deprecatory thinking and, consequently, must divide their attention between the task demands and their worries. The results of this study lend support to the notion that worry interferes with one's ability to disperse attention across tasks.

Moreover, these results imply that worry may have a greater impact on performance when the task requires a higher level of cognitive processing. The simultaneous listening task required the processing of input stimuli to both ears simultaneously - a rather difficult task which is believed to require higher levels of cognitive processing capacity than either the monaural or dichotic listening tasks.

Further, Morris, et al. (1981) have suggested that the two components of anxiety (worry and emotionality) are aroused and maintained by different aspects of stressful situations. The results of this study do not refute this. However, Morris' notion may be expanded to include the cognitive processing level of the task when attempting to untangle the differential impacts of both worry and emotionality on performance. It may be, for example, that when the cognitive demands of the task are great, worry has a more pronounced impact.

The results of this study suggest that future research attempt to incorporate performance tasks that require differing levels of cognitive processing. Such a perspective on the differing cognitive demands may come from the use of

other modes of measuring attention, particularly those relying on different information processing mechanisms.

REFERENCES

Allen, G.J. The behavioral treatment of test anxiety. Behavior Therapy. 1972,3,253-262.

Cronbach,J. & Snow,R. Aptitudes and Instructional Methods. New York: Wiley, 1975.

Deffenbacher, J.L. Worry,emotionality, and task-generated interference in test anxiety: An empirical test of attentional theory. Journal of Educational Psychology. 1978, 70,248-254.

Eqeth, H. Selective attention. Psychological Bulletin. 1967, 1,41-57.

Gopher, D. & Kahneman, D. Individual differences in attention and the prediction of flight criteria. Perceptual and Motor Skills. 1971, 33, 1335-1342.

Kahneman, D. Attention and Effort. New Jersey: Prentice Hall, 1973.

Keele, S.W., Neill, W., & DeLemos, S. Individual Diiferences in Attentional Flexibility. 1978, Center for Cognitive and Perceptual Research, Univ. of Oregon.

Kreitzberg, C. The Effect of Anxiety on Direction of Attention and Short-term Memory. Doctoral Dissertation. City University of New York, 1978.

Liebert, R. & Morris, L. Cognitive and emotional components of test anxiety: A distinction and some initial data. Psychological Reports. 1967, 20, 975-978.

Loo, R. & Cauthen, N. Anxiety and perceptual articulation. Perceptual and Motor Skills. 1976, 43, 403-408.

Mandler, G. & Sarason, S. A study of anxiety and learning. Journal of Abnormal and Social Psychology. 1952, 47, 166-173.

Meichenbaum, D.H. Cognitive modification of test anxious college students. Journal of Consulting and Clinical Psychology. 1972, 39, 370-380.

Morris, L., Davis, M., & Hutchings, C. Cognitive and emotional components of anxiety: Literature review and a revised worry-emotionality scale. Journal of Educational Psychology. 1981, 73, 541-555.

Paul, G. & Erickson, C. Effects of test anxiety on "real life" examinations. Journal of Personality. 1964, 32,480-492.

Sarason, I. Effects of verbal learning, reassurance, and meaningfulness of material. Journal of Experimental Psychology. 1958, 56, 472-477.

Sarason, I. Experimental approaches to test anxiety: Attention and the uses of information. In C.D. Spielberger, (Ed). Anxiety: Current trends in theory and research. New York: Academic Press, 1972.

Sieber, J. A paradigm for research in treatment designed to modify anxiety and its effects. In J. Seiber, H. O'Neil, and S. Tobias. Anxiety, Learning, and Instruction. New Jersey: Erlbaum, 1977.

Spielberger, C. The effects of manifest anxiety on the academic achievement of college students. Mental Hygiene. 1962, 46, 420-426.

Spielberger, C. Anxiety: Current trends in theory and research. New York: Academic Press, 1972.

Tobias, S. Anxiety and instruction. In I. Sarason (Ed). Test Anxiety: Theory, Research, and Applications. New Jersey: Erlbaum, 1980.

Wahl, O. A Performance-Based Test of Individual Differenences in Selective Attention. 1976, ERIC Document #ED 137 663.

Wine, J. Investigations of an attentional interpretation of test anxiety. Doctoral Dissertation. University of Waterloo, 1970. Wine, J. Test anxiety and direction of attention. Psychological Bulletin. 1971, 76, 92-104.

Wine, J. Cognitive-attentional theory of test anxiety. In I. Sarason (Ed). Test Anxiety: Theory, Research, and Applications. New Jersey: Erlbaum, 1980.

TABLE 1 MEANS & STANDARD DEVIATIONS OF INDEPENDENT & DEPENDENT VARIABLES

	CONTROL GROUP (N = 22)		EXP. GROUP (N = 23)	
Variable	M	SD	M	SD
TAS	12.68	5.93	15.17	6.07
WORRY	6.97	1.64	7.24	1.76
EMOTIONALITY	5.77	1.29	6.06	1.29
MONO	28.73	4.23	28.78	2.99
DICHOTIC	22.32	7.21	24.61	5.19
SIMULTANEOUS	20.91	3.86	21.91	5.06

TABLE 2

INTERCORRELATIONS BETWEEN VARIABLES (N = 45)

VARIABLE	1	2	3	4	5	6	7
1. Stress	1.00	.208	.079	.161	.008	.184	.113
2. TAS		1.000	.511	.570	.133	.042	-.112
3. Worry			1.000	.690	-.061	-.087	-.301
4. Emotionality				1.000	.327	.044	-.054
5. Monaural					1.000	.314	.342
6. Dichotic						1.000	.201
7. Simultaneous							1.000

Table 3. SPSS-New Regression Output

Dependent Variable = Dichotic listening task

```
VARIABLE(S) ENTERED ON STEP NUMBER
     1..    INT2
     2..    MONO


MULTIPLE R              0.36148
R SQUARE                0.13067
ADJUSTED R SQUARE       0.08927
STANDARD ERROR          6.01031

ANALYSIS OF VARIANCE
                        DF          SUM OF SQUARES          MEAN SQUARE
REGRESSION               2               220.04507            114.02253
RESIDUAL                42              1517.19930             36.12377

F =       3.15644          SIGNIF F = 0.0528

---------------------- VARIABLES IN THE EQUATION -----------------------

VARIABLE                B          SE B         BETA          T  SIG T

INT2                0.15200       0.12277      0.17906     1.245 0.2202
MONO                0.54761       0.25080      0.31528     2.191 0.0340
(CONSTANT)          7.64029       7.26778                  1.051 0.2992
```

Dependent Variable = Simultaneous listening task

```
VARIABLE(S) ENTERED ON STEP NUMBER
     1..    INT2
     2..    MONO
     3..    WTOT


MULTIPLE R              0.45383
R SQUARE                0.20596
ADJUSTED R SQUARE       0.14706
STANDARD ERROR          4.14697

ANALYSIS OF VARIANCE
                        DF          SUM OF SQUARES          MEAN SQUARE
REGRESSION               3               182.00403             60.96201
RESIDUAL                41               705.09178             17.19736

F =       3.54405          SIGNIF F = 0.0224

---------------------- VARIABLES IN THE EQUATION -----------------------

VARIABLE                B          SE B         BETA          T  SIG T

INT2                0.06143       0.08512      0.10092     0.722 0.4746
MONO                0.40390       0.17336      0.32488     2.330 0.0248
WTOT               -0.77695       0.37347     -0.29144     2.080 0.0438
(CONSTANT)         15.31204       5.82014                  2.631 0.0119
```